



# AVINESH PRATAP SINGH

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## Education

•  IIT Dhanbad	B.Tech Computer Science	CGPA: 8.9	Dhanbad	12/2020 - 05/2024
• JNV Bangalore	12th(CBSE)	Percentage: 94.2%	Bangalore	08/2019 - 04/2020
• JNV Bahraich	10th(CBSE)	Percentage: 91%	Bahraich	08/2017 - 04/2018

## Skills & Relevant Coursework

- C | C++ | Python | JavaScript | MySQL | NodeJs | ExpressJs | ReactJs | NoSQL | Git | Linux | Full-Stack
- DSA | DBMS | OOPS | OS | TOC | Computer Network | Software Engineering
- [Codeforces](#) - 1753 [Expert](#) PC-1123 | [Codechef](#) - 2189 5  PC-516 | [Atcoder](#) - 1324 [Cyan](#) PC-391 | [Leetcode](#) - 2331 PC-1000
- [Guardian](#) | [Hackerrank](#) - 2377.29 6  [Gold level](#) PC-500

## Experience

- |                                  |                              |                  |                          |
|----------------------------------|------------------------------|------------------|--------------------------|
| <b>Software Engineer, Intern</b> | <b><u>Arista Network</u></b> | Bengaluru, India | <b>05/2023 - 07/2023</b> |
|----------------------------------|------------------------------|------------------|--------------------------|
- Designed and implemented an advanced MPLS packet **Static-Routing** solution to enhance data routing and network efficiency. Oversaw 95% project lifecycle, including **requirements gathering, system design, agile development, rigorous testing, and seamless deployment**. Orchestrated intricate MPLS packet hashing, boosting processing throughput.
  - Continuous Integration/Deployment Pipeline Integration, pull requests, code reviews, load/stress testing, unit/integration/e2e testing
  - Seamlessly integrated innovative hashing across cross-functional units, leveraging **C++, Python, Linux**, and **proprietary frameworks** with adept code analysis and **testing tools**.
- |  |                      |                |                          |
|--|----------------------|----------------|--------------------------|
| <b>Software Development Engineer, Intern</b> | <b><u>TEXMiN</u></b> | Dhanbad, India | <b>07/2022 - 12/2022</b> |
|--|----------------------|----------------|--------------------------|
- Drove the automation of a sensor-based Dust Suppression System for Haul Roads in Opencast Coal Mines. Applied **C, C++**, and **DSA** to design and implement efficient software, bolstered by **Arduino programming** and **sensor integration**.
  - Pioneered automation that streamlined dust suppression in challenging mining environments.
  - Implemented **robust solutions**, optimizing road conditions while minimizing environmental impact. Demonstrated expertise in **C, C++**, **DSA**, **Arduino programming**, and **sensor technology**.

## Projects

- |                                  |                     |                          |
|----------------------------------|---------------------|--------------------------|
| <b>UAV Communication (FANET)</b> | <b><u>FANET</u></b> | <b>08/2023 - 11/2023</b> |
|----------------------------------|---------------------|--------------------------|
- Implemented FANET system for optimized UAV communication in disaster scenarios. Developed and integrated Improved Particle Swarm Optimization (IPSO) algorithms for positioning, clustering, selecting cluster head and routing.
  - Optimized UAV positioning and routing using Improved Particle Swarm Optimization (IPSO) algorithms, enhancing communication reliability and reducing energy consumption.
  - Successfully implemented Matlab for realistic UAV simulations, validated through comprehensive testing. **Github:** [pratapavinesh2003](#)
- |                                |                        |                          |
|--------------------------------|------------------------|--------------------------|
| <b>Loyalty Rewards Program</b> | <b><u>Flipcoin</u></b> | <b>07/2023 - 08/2023</b> |
|--------------------------------|------------------------|--------------------------|
- Designed and implemented a cutting-edge blockchain-enabled loyalty and rewards program for E-commerce platforms, harnessing blockchain technology to enhance **security, transparency, and user engagement**.
  - Engineered **blockchain-based fungible loyalty points**, optimizing user engagement and rewards using **Smart Contracts and solidity**.
  - Orchestrated instant on-chain settlements, designed rules for token earning, and developed a user-friendly interface for efficient loyalty point management and redemption using **ReactJS**. **Github:** [pratapavinesh2003](#)

## Responsibility and Mentorship

- **Codeism:** Instructor at CodeISM-CSE Society of IIT Dhanbad **08/2022 - 05/2024**
- **BFX:** Instructor at - Being Artifex Programming Technical Society of IIT Dhanbad **12/2020 - 05/2023**

## Others

- **JEE Advance and JEE Mains:** Secured **AIR 2888** in **JEE Advance** and **99.66 percentile** in **JEE Mains**.
- **Secured 1st Position** in overall CSE batch in 8th semester with **9.88/10.00 SGPA**.
- **Amazon ML SSP (2022 and 2023)** | **TOP 100** in **Amazon HackON 2022** | **Qualified Flipkart Grid 5.0 Software Development Track**
- **Global Rank 240** in **Google Kickstart 2022 Round F** | **Global rank 47** in **Codechef LunchTime 2022** | **Global Rank 15** in **Codechef CookOff 2022**